

A contribution to the knowledge of the wolf spider fauna of Morocco : new species and new records (Araneae : Lycosidae)

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Abstract. This short contribution reports on a collection of wolf spiders from Morocco. New records of 11 lycosid species are listed. Of these species, four are new to the spider fauna of Morocco.

Résumé. Contribution à la connaissance de la faune d'araignées loup du Maroc: localités de capture et espèces nouvelles (Araneae : Lycosidae)

Cette contribution donne les résultats d'une collection d'araignées loup au Maroc. Une liste de nouvelles localités de capture concerne 11 espèces de Lycosidae. Quatre d'entre eux sont nouveau pour la faune aranéologique du Maroc.

Samenvatting. Bijdrage tot de kennis van de wolfspinnenfauna van Marokko: nieuwe soorten en nieuwe vindplaatsen (Araneae : Lycosidae)

Deze bijdrage rapporteert over de resultaten van een kort onderzoek naar de wolfspinnenfauna van Marokko. Een lijst van nieuwe lokaliteiten wordt van elf soorten gegeven. Hiervan zijn er vier nieuw voor de spinnenfauna van Marokko.

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Introduction

The wolf spider fauna of the African continent is rarely studied. Although a lot of species have been described, identification of the specimens is often very difficult due to the unreliability of older descriptions. The most recent revision of the African wolf spider fauna (ROEWER, 1959a, 1960) has complicated the taxonomy considerably. Many new genera were described, based on highly variable morphological characteristics (size and positioning of the eyes, measurements of labium and maxillae, colour pattern, the number of teeth on the margins of the chelicerae, etc.). This finally resulted in a confusing taxonomy, difficult to assess, in which phylogenetic relationships between taxa are unclear. An **enormous** number of new species was added to the list of known lycosids (see BRIGNOLI 1985, ROEWER 1954) often based on insufficient descriptions and unreliable drawings or without any drawings at all. The use of genital characters for distinguishing spider species, now generally accepted, was neglected.

The fauna of northern Africa is very poorly known and few faunistic studies have been carried out so far. The spider fauna of Morocco has been investigated to some extent, mostly by DENIS and SIMON. SIMON (1909) published an important regional study on the spiders of Morocco in which he cited 102 species. Only 25 of these were already known from this country before that date. In this paper, nine species of Lycosidae are mentioned. DENIS (1955) reviewed the knowledge concerning the spider fauna of Morocco: 247 spider species were cited from this country, 20 belonging to the Lycosidae.

More recently, an intensive study dealing with the Lycosidae of Morocco was carried out by GUY (1966). Although this study only treated the subfamily Lycosinae, many new species were added to the list.

This short communication intends to add to the knowledge of the fauna of North Africa, more specifically of Morocco. It is based on a collection made by one of us (RJ) during the summer of 1971. Many new records are listed. Four species proved to be new to the fauna of Morocco and are marked with an asterisk (*) in the following list. All the material is deposited in the Koninklijk Museum voor Midden-Afrika, Tervuren (MRAC).

Inventory of the collected wolf spider species

1. *Alopecosa albofasciata* (BRULLÉ, 1832)

1 female: Ifrane, waterfall, 19-25.VIII.1971. This beautiful *Alopecosa*-species, recognisable even in the field by its two striking stripes of white hairs on the sides of the abdomen, has a circummediterranean distribution. According to ROEWER (1959b) it also occurs further eastwards up to Iran and India. It is very abundant in the neighbouring countries, such as Spain, Italy, Algeria (LUGETTI & TONGIORGI 1969, own observations).

2. *Arctosa cinerea* (FABRICIUS, 1777)

2 females: Kenitra, 6.VIII.1971. This seems to be the largest *Arctosa* occurring in North Africa. The species has a very wide distribution, even beyond the mediterranean countries.

3. *Arctosa lacustris* (SIMON, 1876)

3 females: Imlil, 2000-2200m, 31.VII.1971. This relatively small *Arctosa*-species is usually found in damp situations in the vicinity of water. It has a circummediterranean distribution (GUY 1966, LUGETTI & TONGIORGI 1965).

4. *Arctosa leopardus* (SUNDEVALL, 1832) *

1 male, 2 females: Ifrane, 22.VII.1971. This is the first record of this species for northern Africa. It has a wide distribution: Europe, Siberia, Turkestan, Asia Minor, Palestina, Syria (LUGETTI & TONGIORGI 1965).

5. *Arctosa perita* (LATREILLE, 1799) *

1 female: Mdiq, 22.VII.1971. *Arctosa perita* has a palaearctic distribution (LUGETTI & TONGIORGI 1965). It is cited here for the first time from Morocco.

6. *Lycosa narbonensis* (LATREILLE, 1806)

1 male, 1 female: Ifrane, 21.VII.1971; 1 male: Ifrane, 22.VII.1971; 1 male: Dayet Hacklaf, 23.VII.1971. Little is known about the detailed distribution patterns and ecology of the species of the genus *Lycosa* because the taxonomic position of many of the cited mediterranean representatives of this genus is very uncertain. A systematic revision is urgently needed. In the present state of our knowledge the specimens are identified as *L. narbonensis*. This species has been recorded from many other mediterranean countries (e.g. CORNIC 1978). It is one of the famous, erroneously called '*Tarantula*'-species of the mediterranean.

7. *Lycosa radiata* LATREILLE, 1817

2 females: Kenitra, 6.VIII.1971; 1 female: Ifrane, 22.VII.1971; 1 male, 2 females: Ifrane, 21.VII.1971; 1 female: Imlil, Jebel Toubkal, ca. 2000m, 31.VII.1971. This seems to be the most common and widespread representative of this genus in the mediterranean. The male collected at Ifrane probably belongs to the subspecies *L. radiata minor* SIMON, 1876. This subspecies was mentioned for the first time from Morocco by GUY (1966), also from Ifrane. This species was considered by many authors to belong to the genus *Hogna* but this is more recently thought to be only a subgenus of *Lycosa*.

8. *Pardosa proxima* (C.L. KOCH, 1848)

2 males, 3 females: Ifrane, 21.VII.1971; 3 males, 2 females: Ifrane, 22.VII.1971; 8 males, 12 females: Ifrane-Giland, 19-25.VII.1971; 3 males, 14 females: Imlil, ca. 2000m, 31.VII.1971; 1 female: Imlil, 2000-2200m, 4.VIII.1971; 7 males, 4 females (and 1 cocoon): Ifrane, waterfall, 19-25.VII.1971; 1 male, 3 females: Dayet, Hacklaf, 23.VII.1971; 1 male: Toubkal, 2500-3000m, 1.VIII.1971; 1 male: Dayot-Giland, 19-25.VII.1971. Undoubtedly the most common and abundant wolf spider in the western mediterranean. The species is found in a wide variety of habitats. It has a wide distribution, mainly circummediterranean, but reaching its northern distribution limit in Belgium (ALDERWEIRELDT & DESENDER 1989, ALDERWEIRELDT & MAELFAIT 1990).

9. *Trabaea cazorla* SNAZELL, 1983 *

1 male: Ifrane, waterfall, 19-25.VII.1971; 1 female: Ifrane-Giland, 19-25.VII.1971. New to the fauna of Morocco. The species was only recently distinguished by SNAZELL (1983) from the very similar *Trabaea paradoxa* SIMON, 1876, and described from Spain. Its occurrence in northern Africa is discussed in ALDERWEIRELDT et al. (in press).

10. *Trochosa hispanica* SIMON, 1870 *

3 males, 1 female: Ifrane, waterfall, 19-25.VII.1971. Although the palaearctic representatives of the genus *Trochosa* are famous for their often difficult identification (cf. ENGELHARDT 1964), we were able to identify this species by using the recent illustrations and descriptions of HÄNGGI (1989). It is here recorded for the first time from Morocco. We also recorded it from Algeria. *T. hispanica* appears to have a mainly western mediterranean distribution (mentioned from France, Spain, Italy (CORNIC 1978)). However, it occurs northwards up to the southern edge of the Alps (HÄNGGI 1989). It was mentioned from Corsica and Sardinia (CANARD 1988, KRAUS 1955).

11. *Wadicosa venatrix* (LUCAS, 1846)

1 female (and cocoon): Kenitra, 6.VIII.1971; 1 female (and cocoon); Oued 5 km from Nfiss, Ouizzane, 4.VIII.1971. The species *Wadicosa venatrix* was recently designated as type species of the new genus *Wadicosa* by ZYUZIN (1985). This genus was rightly created on the base of genital characteristics. *W. venatrix* has a vast distribution. It is mainly circummediterranean but it

also reaches India in the east and Soudan and the island of Sokotra in the south (DENIS 1953). It is often common, usually in relatively wet habitats.

Conclusion

This small collection provides usefull additional information on the distribution of wolf spiders in Morocco which was apparently very poorly investigated. Further collecting, especially in the south of the country and somewhat earlier and later in the year, would undoubtedly reveal interesting, extra information concerning the spider species of Morocco and their distribution.

References

- Alderweireldt, M., Bosmans, R. & Jocqué, R., in press. *Trabaea cazorla* Snazell, 1983, new to Africa (Araneae, Lycosidae). - *Newsl.Br.arachnol.Soc.*
- Alderweireldt, M. & Desender, K., 1989. Faunistisch araneologisch onderzoek van intensief bewerkte akkers en hun randen in België: een korte evaluatie. - *Phegea* 17(4): 161-164.
- Alderweireldt, M. & Maelfait, J.-P., 1990. Catalogus van de spinnen van België. Deel VII. Lycosidae. - Studiedocumenten van het Koninklijk Belgisch Instituut voor Natuurwetenschappen, nr. 61, 92 p.
- Brignoli, P., 1985. A catalogue of the Araneae described between 1940 and 1981. Manchester University Press, 755 p.
- Canard, A., 1988. Contribution à l'étude des Aranéides du Parc Naturel Régional de Corse. I. Données générales sur les peuplements d'Aranéides de Corse. Rennes, 52 p.
- Cornic, J.-F., 1978. Première contribution à la connaissance des araignées du Mont Ventoux. La Terre et la Vie, suppl. 1978: 281-294.
- Denis, J., 1953. Araignées recueillies par P. Remy du Sud Algérien au Hoggar. - *Bull.Soc.zool.Fr.* 78: 311-324.
- Denis, J., 1955. Bibliographie des araignées du Maroc et addition d'espèces nouvelles. - *Bull.Soc.Sci.nat.Maroc* 35: 179-207.
- Engelhardt, W., 1964. Die mitteleuropäischen Arten der Gattung *Trochosa* C.L. Koch, 1848 (Araneae, Lycosidae). Morphologie, Chemotaxonomie, Biologie, Autökologie. - *Z.Morph.Okol.Tiere* 54: 219-392.
- Guy, Y., 1966. Contribution à l'étude des araignées de la familles des Lycosidae et de la sous famille des Lycosinae avec étude spéciale des espèces du Maroc. - *Trav.Inst.scient.chérif.(Zool.)* 33: 1-174.
- Hänggi, A., 1989. Beiträge zur Kenntnis der Spinnenfauna des Kantons Tessin. II. Bemerkenswerte Spinnenfunde aus Magerwiesen der Montanstufe. - *Bull.Soc.ent.Suisse* 62: 167-174.
- Kraus, O., 1955. Spinnen von Korsica, Sardinien und Elba. - *Senckenberg.biol.* 36: 371-394.
- Lugetti, P. & Tongiorgi, P., 1965. Revisione delle species italiane dei generi *Arctosa* C.L. Koch e *Tricca* Simon con note su una *Acantholycosa* delli Alpi Giulie. - *Redia* 49: 165-229.
- Lugetti, P. & Tongiorgi, P., 1969. Recherche sul genere *Alopecosa*. - *Atti Soc.tosc.Sci.nat. (B)* 76: 1-100.
- Roewer, C.F., 1954. Katalog der Araneae, 2(a). Brussel, 923 p.
- Roewer, C.F., 1959a. Araneae Lycosaeformia. II. Lycosidae. Exploration du Parc national de l'Upemba, Mission G.F. De Witte 55: 1-518.
- Roewer, C.F., 1959b. Die Araneae, Solifuga und Opiliones des Sammlungen des Herrn Dr. K. Lindberg aus Griechenland, Creta, Anatolien, Iran und Indien. - *Göteborgs K.Vetensk. O.vitter.Samm.Handl. (8B)* 8: 1-47.
- Roewer, C.F., 1960. Araneae Lycosaeformia. II. Lycosidae (Fortsetzung und Schluss). Exploration du Parc national de l'Upemba, Mission G.F. De Witte 55: 519-1040.
- Simon, E., 1909. Étude sur les Arachnides recueillis au Maroc par M. Martinez de la Escalera en 1907. - *Mem.Soc.Esp.Hist.Nat.* 6(1): 1-43.
- Snazell, R., 1983. A new wolf spider of the genus *Trabaea* (Araneae, Lycosidae) from southern Spain. - *Bull.Br.arachnol.Soc.* 6(2): 75-77.

Zyuzin, A.A., 1985. [Generic and subfamilial criteria in the systematics of the spider family Lycosidae (Aranei), with the description of a new genus and two new subfamilies] [in Russian]. - *Proc.Zool.Inst.USSR, Academy of Sciences*, V.I. Obtsharenko (ed.) 139: 40-51.

Korte mededeling

De gestippelde beer (*Utetheisa pulchella* LINNAEUS) (Lepidoptera: Arctiidae)

Heelwat vlinderkenners hebben van deze fraaie beervlinder ooit wel eens gedroomd. De kans op een ontmoeting met *Utetheisa pulchella* is bij ons echter uiterst klein. De vlinder bewoont een enorm areaal en leeft verspreid in de tropen en subtropen van de Oude Wereld. Ook in het Middellandse Zeegebied is de Gestippelde Beer gewoon. Noordelijker wordt hij alleen aangetroffen als zeldzame of zeer zeldzame immigrant.

Zoals alle Arctiidae is *U. pulchella* geen sterke vlieger. Hij zal altijd door luchtstromingen naar onze streken gevoerd moeten worden (LEMPKE 1972). Met de overheersende zuidwestenwind moet de oorsprong van onze immigranten gezocht worden in Zuid-Frankrijk en Spanje. De Beneluxlanden liggen blijkbaar aan de rand van de gebruikelijke trekroute. In België is de Gestippelde Beer tot nu toe slechts in 4 jaren waargenomen, in Nederland in 9 en in het Groothertogdom Luxemburg in 3 jaren.

Tabel 1 : Meldingen van *Utetheisa pulchella* LINNAEUS uit België en het Groothertogdom Luxemburg (Bron : Ch. VERSTRAETEN, pers. med. 1991).

- 1 ex. 1.VI.1874, Schalkhoven (Limburg), in coll. K.B.I.N.
- 2 ex. 28.VII.1928, Kortenbergh (Brabant), DEBAUCHE, in coll. K.B.I.N.
- 1 ex. 11.VIII.1948, Zoniënwood (Brabant), Fr. HEYLEMANS, in coll. K.B.I.N.
- 1 ex. 27.V.1960, Esneux (Luik), Ch. VERSTRAETEN.
- 1 ex. voor 1950, Rumelange (Groothertogdom Luxemburg).
- 1 ex. voor 1950, Luxembourg (Groothertogdom Luxemburg).
- 1 ex. voor 1950, Grünenwald (Groothertogdom Luxemburg).

De Britse eilanden scoren heelwat beter. In de periode 1818 tot 1982 werd de vlinder er in 47 jaren gezien (LEMPKE 1972, SKINNER 1985). In de regel gaat het om enkelingen. Toch zijn er ook jaren geweest met een vrij sterke immigratie. In 1871 werden minstens 30 stuks geteld, 49 in 1892, 10 in 1923 en 33 in 1961. De meeste vlinders worden gesignaleerd uit Zuid-Engeland maar in 1961 kwamen er ook meldingen uit Schotland en Ierland. De immigratie verliep toen schoksgewijs met toppen op 28 augustus, 15 en 16 september en einde september (LEMPKE 1972). G.W. HURST vergeleek de aankomstdata met de weerkaarten. Hij kon aantonen dat de vlinders in Spanje waren opgestegen en via hogere, noordwestelijke luchtstromingen Groot-Brittannië hadden bereikt. Hun reis had 18 à 24 uur geduurd.

In de tropen plant de Gestippelde Beer zich zonder diapauze voort. In Zuid-Europa vliegt de vlinder in 2 of 3 generaties. In België is hij een occasionele immigrant. De rups is niet in staat te weerstaan aan de strenge winters, zoals we die gewoonlijk in onze streken kennen.

U. pulchella houdt van warmte en zon. Volgens Britse bronnen vliegt het imago in de zonneschijn (SKINNER 1985, HEATH 1979). Dat de vlinder ook 's nachts actief is, bewijst een lichtvangst te Esneux (prov. Luik) door Ch. VERSTRAETEN op 27 mei 1960 (pers. med. 1991).

De eitjes worden in grote groepen afgezet op bladeren van diverse ruwbladigen (Boraginaceae) zoals Vergeet-mij-nietje (*Myosotis*), Heliotroop (*Heliotropium*), Slangekruid (*Echium*), Komkommerkruid of Bernagie (*Borago officinalis*) en Ossetong (*Anchusa*). Sommige bronnen